

## Supporting Speech: How Can You Help Someone be Better Understood

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## Why do folks have trouble speaking?

- Poor speech-motor control
  - Hard to move articulators
  - Challenging to coordinate many motor movements for speech
  - May or may not be accompanied by difficulties with oral nonspeech movements
- Difficulty coordinating breath support for speaking

## Hearing issues

- Conductive loss- when sound is not transmitted through the ear canal to ear drum and the small bones beyond it.
  - Reduced hearing, e.g., faint sounds
  - May be corrected medically or surgically

## Hearing

- Sensorineural loss- damage to the inner ear (cochlea) and the nerve paths from the inner ear to the brain
- Permanent loss
- Reduced sound level
- Difficulty understanding speech

## Hearing

- Possible causes of sensorineural hearing loss:
  - Some genetic syndromes
  - Tumors
  - Viruses
  - Head trauma
  - Noise exposure
  - Aging

## Hearing assessment

- Formal assessment is best
- Audiologist
- If hearing has not been assessed in three-five years; reassess
- For someone with significant communication difficulties, consider a screening annually
- Aging population

## Vision considerations

- Speaking of aging...
- Impact on
  - Reading visual cues
  - Use of any visual supports

## Dysarthria

According to Darley, Aronson and Brown (1975):

- speech disorder resulting from
- a weakness, paralysis, or incoordination of the speech musculature

## Dysarthria

- Characterized by:
  - Slowness
  - Weakness
  - Incoordination
  - Change in tone of speech musculature

## Dysarthria

- Can affect all processes involved in speech production:
  - respiration
  - phonation
  - articulation
  - resonance

## Dysarthria

- Video example from University of Utah (2001)

## Dysarthria

- Damage to the central or peripheral nervous system that impairs the transmission of neural messages to the muscles involved in speech.
- Inability to send appropriate messages to the muscles used for speech

## Dysarthria

- May have due to:
  - Cerebral Palsy
  - Traumatic Brain Injury
  - Downs Syndrome
  - Parkinson's Disease
  - ALS (Lou Gerhig's Disease)

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## Dysarthria- What you may hear

- Slurred, jerky, or garbled speech
- Difficult to produce and/or understand
- Problems controlling pitch, loudness, and rhythm when speaking
- Slow speech or rapid, mumbled speech
- Speaking softly or barely able to whisper

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## Dysarthria- What you may hear or see

- Limited ability to move the tongue, lips, and jaw
- Changes in the voice quality (nasal, hoarse, or stuffy)
- Chewing and swallowing problems
- Drooling or poor control of saliva

<http://www.stronghealth.com/services/speechpathology/conditions/treatingdysarthria.cfm>

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## Dysarthria

Most common errors:

- Imprecise production of consonants
  - Distortions
  - Omissions

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## Dysarthria types-depending on site & size of lesion

- Spastic- increased muscle tone or stiffness
- Flaccid- weakness or reduced muscle tone
- Ataxia- Incoordination of muscles
- Rigidity-consistently increased muscle tone through movement

Yorkston (1996)

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## Apraxia of Speech

- Motor planning/programming deficient
- Damage to parts of brain responsible for motor programming speech/phonology

(McCaffrey, P.)

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## May be called Apraxia of Speech or.....

- Apraxia
- Acquired apraxia of speech
- Verbal apraxia
- Dyspraxia

(ASHA Apraxia of Speech in Adults)

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## Apraxia of Speech

- Apraxia of speech is **often**, but not always, accompanied by **oral motor apraxia**, or an inability to volitionally move the mouth, tongue, lips, cheeks, larynx, and pharynx as directed.

(Halperin, 1986)

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## Apraxia of speech can be mild or severe.

- People with apraxia may have
  - difficulty imitating speech sounds
  - difficulty imitating non-speech movements (oral apraxia), such as sticking out their tongue
  - groping when trying to produce sounds

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## Apraxia of speech

- In severe cases, an inability to produce sound at all
- Inconsistent errors
- More complex words, longer sentences are more difficult

ASHA Apraxia of Speech in Adults

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## Apraxia of Speech

- Slow rate of speech
- May be able to produce "automatic speech" (***rote speech***), such as greetings like "How are you?"

(ASHA Apraxia of Speech in Adults)

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## Apraxia of Speech

- Short video sample

## Apraxia of Speech

- Initial consonants are misarticulated more frequently
- Errors are **complications** rather than simplifications
- Consonant clusters difficult e.g. sp, tr

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## Apraxia of Speech sample

“I am looking an a drawing or a-a pec-  
picture of what is apparently a tor-nuh-  
ner-nor-tornatiuhd blew-brewing in the  
c-countryside. This is having an nuh-  
nuhmediate and frightening ef-fff-fuh-  
feckon a fairm famerly num-ber-ing ---  
six uh humans and af-ff-ss-uh-sh-suh-  
sorted farm uh animals.” (Darely, et al, 1975)

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## How can we help if problem is related to dysarthria?

- Speech therapy is generally effective
- Differ depending on what type of dysarthria
  - Slowing down
  - Breath support – more pauses
  - Work on functional phrases vs. discrete motor exercises

AAC techniques may be used

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## Possible Goals of Treatment

- Slowing the rate of speech
- Improving the breath support so the person can speak more loudly

(ASHA Dysarthria)

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## Possible Goals of Treatment

- Strengthening muscles -best done in the context of speech
- Increasing mouth, tongue, and lip movement by increasing effort (e.g., trying to be louder)

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## Possible Goals of Treatment

- Improving articulation so that speech is more clear
- Teaching caregivers and family members strategies
- In severe cases, learning to use alternative means of communication (e.g., simple gestures, alphabet boards, or electronic or computer-based equipment)

(ASHA Dysarthria)

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### Speech supplementation

(Yorkston, Hansen, Beukelman, 2004)

- Reviewed 19 studies with individuals with dysarthria (mostly acquired)

Supplementation = while speaking

- Use of alphabet board
- semantic cues or
- gestures

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### Speech supplementation

(Yorkston, Hansen, Beukelman, 2004)

- Results:
  - Supplementation most helpful with severe dysarthria
  - Alphabet best, then semantic
  - May see improvement in speech
  - Listener skill affects success

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### Speech supplementation

(Yorkston, Hansen, Beukelman, 2004)

- Best candidates:
  - Dysarthria affects communication in natural settings
  - Adequate pragmatic and cognitive skills
  - Sufficient motor function to generate clues

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### Tips for the Person With Dysarthria

- Try to limit conversations when tired, your speech will be harder to understand
- If you become frustrated, try to use other methods, such as pointing or gesturing, to get your message across, or take a rest and try again later

(ASHA Dysarthria)

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### Easy Things You Can Do to Help Someone with Dysarthria

- Give the person ample time to speak.
- Keep the conversation going, even if some words are unclear.
- Encourage the person to use short phrases.

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### Easy Things You Can Do to Help Someone with Dysarthria

- Encourage gestures, facial expressions, and writing, as well as speaking.
- If you still don't understand the message, ask yes/no questions or have the speaker gesture, draw or point

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### Easy Things You Can Do to Help Someone with Dysarthria

- Gentle reminders to slow down may be useful.
- Refrain from pointing out mistakes or asking the person to correct speech.
- Face the person when you are

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### Easy Things You Can Do to Help Someone with Dysarthria

- Reduce background noise in the room.
- If the person wears dentures, make sure that they are in and fitting properly.

(University of Rochester Medical Center)

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### How can you help? Apraxia

- Main speech therapy focus =
  - Repetition, repetition, repetition
- Work to retrain muscles/motor patterns for speech
- Slowing down, pacing

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### Consider multiple modes

- Speech
- Gestures
- Pointing to visual supports
- Use of speech generating device

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### Increase use of visual supports

- Pictures/words and/or letter boards
- Premade picture based menus, shopping lists
  - Attainment Co.
  - [www.attainmentcompany.com/](http://www.attainmentcompany.com/)

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### Increase use of visual supports

- Remnant books- personalized books of “remnants” as topic starters/clarifiers
  - E.g. movie stub, photo, napkin from restaurant

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## Visual supports

- Pointing to visual supports while speaking may improve speaker's intelligibility without changing their speech skills at all
- Case example

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## Speech Generating Device (SGD)

- With more severe, may be part of their communication package
- May use in specific situations
- May use with unfamiliar listeners

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## Speech therapy resources

- <http://www.asha.org/findpro/-> check in Vermont & New Hampshire
- In Medicaid Funding Guide- list of AAC evaluators

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